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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,034	08/24/2000	Daniel F. Klessig	RUT 98-0073	8125

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DANN DORFMAN HERRELL & SKILLMAN  
SUITE 720  
1601 MARKET STREET  
PHILADELPHIA, PA 19103-2307

EXAMINER

MEHTA, ASHWIN D

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/623,034

Applicant(s)

KLESSIG ET AL.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,5,7,10,11,13,15,16,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,10,11,13,15,16,18 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The objections to claims 1, 7, and 16 are withdrawn, in light of the claim amendments.
3. The rejections of claims 1, 4, 5, 7, 10, 12, 13, 15, and 16 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, are withdrawn, in light of the claim amendments.
4. The rejection of claims 1, 4, 5, 7, 10-13, 15, and 16 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, for lack of written description, is withdrawn in light of the claim amendments.

### ***Claim Objections***

5. Claim 11 remains objected to for failing to further limit the claim from which it depends, for the reasons of record stated in the Office action mailed 09 October 2002. Applicants traverse the objection in the paper received 17 March 2003. Applicants' arguments were fully considered but were not found persuasive.

Applicants argue that claim 11 was previously cancelled (response, page 5, 5<sup>th</sup> full paragraph). However, claim 11 is still pending. On page 8 of the previous amendment submitted by Applicants (received 06 June 2002), Applicants asked that claims 11 and 16 be

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cancelled. However, the same paper amended claims 11 and 16. Therefore, the claim amendments were entered, and the claims were not cancelled.

***Claim Rejections - 35 USC § 112***

6. Claim 11 remains rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons of record stated in the Office action mailed 09 October 2002. Applicants traverse the rejection in the paper received 17 March 2003. Applicants' arguments were fully considered but were not found persuasive.

Applicants have indicated that the inclusion of a specific SEQ ID NO: readily apprises the skilled person of the metes and bounds of the claim (response, paragraph bridging pages 6-7). However, claim 11 has not been amended in the paper submitted 17 March 2003.

7. Claims 1, 4, 5, 7, 10, 11, 13, 15, 16, remain and claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, for the reasons of record stated in the Office action mailed 09 October 2002. Applicants traverse the rejection in the paper received 17 March 2003. Applicants' arguments were fully considered but were not found persuasive.

Applicants argue that the nucleic acid encompassed by the claims is now referred to as SEQ ID NO: 1. However, claim 11 still recites "WIPK." In response to the issue that increased

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expression of WIPK in transgenic plants does not result in enhanced disease resistance,

Applicants argue that Zhang et al. (cited by the Examiner in the last Office action) were concerned with assessing the effect of WIPK and SIPK overexpression on the activation of downstream genes, and that there is no teaching or suggestion that the activity of WIPK in the assay system of Zhang et al. is in any way indicative of its overall role in the induction of multiple defense responses in higher plants (response, paragraph bridging pages 10-11).

However, Zhang et al. teach that that overexpressed WIPK in transgenic plants is not active. It is not clear how an overexpressed product can contribute to anything if it is inactive. Applicants argue that Zhang et al. express no doubt that WIPK plays a role in pathogen resistance, and discuss the combined role of WIPK and SIPK in pathogen resistance (response, page 11, 1<sup>st</sup> full paragraph). That WIPK has a role in pathogen resistance is not in dispute. The issue, however, is whether the overexpression of SEQ ID NO: 1 in the instantly claimed plants and methods is alone sufficient to confer enhanced disease resistance to the plant. As pointed out by Applicants, Zhang et al. teach that a phosphatase may be deactivating the exogenously produced WIPK (response, page 11, 1<sup>st</sup> full paragraph). If the expressed protein is not active in the claimed plants, then it alone cannot confer enhanced disease resistance to the plant. Applicants indicate that there are a plethora of MAPKKs that activate WIPK (response, page 11, 1<sup>st</sup> full paragraph). However, the plethora of MAPKKs are apparently not present in the plants overexpressing WIPK of Zhang et al., and there is no indication that such MAPKKs are activating WIPK in the claimed plants and method. Further, while Applicants indicate that WIPK is not active in the “particular system” of Zhang et al., Applicants do not indicate how the transgenic plant disclosed in the reference is different from the claimed plants, other than in the type of promoter that is

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used. Applicants do not explain why the protein encoded by SEQ ID NO: 1 would be produced in an active state in the claimed plants and method. Applicants also argue that overexpression of WIPK results in elevated levels of salicylic acid and other pathogenesis related proteins (response, page 11, 2<sup>nd</sup> full paragraph). However, WIPK activation is independent of salicylic acid. Further, this occurs in wounded plants, and Applicants have not shown that this leads to enhanced disease resistance. If Applicants have developed transgenic plants expressing SEQ ID NO: 1 having enhanced disease resistance to the disease-causing agents listed in the claims, it is suggested that a declaration be submitted to that effect, and that the plants were produced following the teachings in the specification.

***Claim Rejections - 35 USC § 103***

8. Claims 1, 4, 5, 7, 10, 11, 13, 15, 16, remain and claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo et al. in view of Sanger et al., Gatz et al., Enyedi et al., Yu et al., and He et al., for the reasons of record stated in the Office action mailed 09 October 2002. Applicants traverse the rejection in the paper received 17 March 2003. Applicants' arguments were fully considered but were not found persuasive.

Applicants argue that Seo et al. fail to teach the FMV promoter or an inducible promoter, and also are silent regarding disease resistance to the pathogens specified in the instant claims (response, page 12, 3<sup>rd</sup> full paragraph). However, Seo et al. do not teach away from replacing the promoter, and Sanger et al. and Gatz et al. do teach reasons why one of ordinary skill in the art would have used the FMV 35S promoter or the inducible tetracycline repressor/operator controlled promoter to express transgenes. Further, the combination of the cited references does

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teach why resistance against the cited disease-causing agents would obviously have been enhanced. Applicants argue that Seo et al. teach that the protein of SEQ ID NO: 1 is a wound-induced protein kinase and are silent as to whether the enzyme is pathogen induced, and that it is a well-settled premise in patent law that silence in a reference is not a proper substitute for adequate disclosure of facts from which a conclusion of obviousness may justifiably follow (response, page 13, 1<sup>st</sup> full paragraph). However, the claims do not indicate that SEQ ID NO: 1 is to be induced by pathogens. See In re Lindner, 173 USPQ 356 (CCPA 1972) and In re Grasselli, 218 USPQ 769 (Fed. Cir. 1983) which teach that the evidence of nonobviousness should be commensurate with the scope of the claims. Applicants argue that because Seo et al. do not recognize the link between WIPK expression and enhanced pathogen resistance, there is no motivation to overexpress WIPK to induce pathogen resistance (response, paragraph bridging pages 13-14). However, Seo et al. do indicate that the pathogenesis-related proteins induced in the transgenic plants are those that are normally induced by pathogen attack (page 1990). Also, Applicants admit that salicylic acid and other pathogenesis-related proteins are known to confer pathogen resistance to plants (response, page 11, 2<sup>nd</sup> full paragraph).

### ***Summary***

9. Claims 1, 4, 5, 7, 10, 11, 13, 15, and 16 remain and claims 18 and 19 are rejected.
10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

May 27, 2003

  
ASHWIN D. MEHTA, PH.D.  
PATENT EXAMINER